

Group Members: _____

Date: _____

Mixture Word Problems “Telephone”

Directions: Each member of your group will begin with a different word problem. Each must predict the answer, and then pass the word problem clockwise to the next person. Then, everyone will define the variables for the word problem. Continue passing the word problems, completing one step at a time, until the word problems are finished.

Error Analysis: If you see an error in a previous step, try to correct the error. TALK to each other and PEER TUTOR. This is all a part of COOPERATIVE LEARNING!

Grading: You will be graded on your cooperation, focus, and effort.

Word Problem A: Kirk Cousins and Tom Brady each have some Gatorade for their team. Kirk has a mixture that is 50% Gatorade and Tom Brady has a mixture that is 31.25% Gatorade. How much of each quarterback's mixture must they use to create one hundred gallons of a 35% Gatorade mixture?

a. Predict - Whose mixture will they need more of?

b. Define variables that make sense for the situation.

c. Write a system of linear equations that represents the situation.

d. SOLVE the system. Show ALL work.

e. Check your answers via SUBSTITUTION and REALITY.

f. Write your final answers with LABELS.

Word Problem B: Doc Brown and Marty McFly need eight units of 80% plutonium to fly the DeLorean. Doc has twenty units of 60% plutonium and Marty has thirty units of 92% plutonium. How many units of Doc's plutonium do they need? How many units of Marty's?

a. Predict - Whose mixture will they need more of?

b. Define variables that make sense for the situation.

c. Write a system of linear equations that represents the situation.

d. SOLVE the system. Show ALL work.

e. Check your answers via SUBSTITUTION and REALITY.

f. Write your final answers with LABELS.

Word Problem C: Sara has a box of Lucky Charms that is 25% marshmallows and Aya has a box of Lucky Charms that is 79% marshmallows. They want to combine their Lucky Charms so that they have thirty grams of 70% marshmallows. How many grams of Sara's Lucky Charms will they need? How many grams of Aya's?

a. Predict - Whose mixture will they need more of?

b. Define variables that make sense for the situation.

c. Write a system of linear equations that represents the situation.

d. SOLVE the system. Show ALL work.

e. Check your answers via SUBSTITUTION and REALITY.

f. Write your final answers with LABELS.

Word Problem D: Nona and Amelia each have a grape juice mixture. Nona has forty liters of a 95% grape juice and Amelia has sixty liters of a 65% grape juice. How many liters of each girl's grape juice will they need to create twenty-four liters of a 90% mixture?

a. Predict - Whose mixture will they need more of?

b. Define variables that make sense for the situation.

c. Write a system of linear equations that represents the situation.

d. SOLVE the system. Show ALL work.

e. Check your answers via SUBSTITUTION and REALITY.

f. Write your final answers with LABELS.

Answers:

Word Problem A: 80 gallons of Brady's Gatorade, 20 gallons of Cousins' gatorade

Word Problem B: 3 units of Doc's plutonium, 5 units of Marty's plutonium

Word Problem C: 25 grams of Aya's; 5 grams of Sara's

Word Problem D: 4 liters of Amelia's; 20 liters of Nona's